REMARKS

This is a full and timely response to the non-final Office Action mailed by the U.S. Patent and Trademark Office on May 16, 2006. Upon entry of the attached amendments, claims 1-27 are pending in the application. Claims 1, 10 and 19 have been amended. The subject matter of the amended claims is supported in at least the schematic diagram of Figure 2 and the related detailed description. Consequently, no new matter is added to the present application.

The following remarks address each rejection against Applicants' claimed systems and methods. Accordingly, reconsideration and allowance of the application and presently pending claims 1-27 are respectfully requested.

I. Claim Rejection Under 35 U.S.C. § 103 – Claims 1-27

A. Statement of the Rejection

Claims 1-27 presently stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,185,201 to Kiyanagi *et al.*, hereafter *Kiyanagi* in view of U.S. Patent No. 4,394,776 to Borras *et al.*, hereafter *Borras*.

B. Discussion of the Rejections

Applicant's amended independent claims 1, 10 and 19, each recite features that are not disclosed by the proposed combination.

For a claim to be properly rejected under 35 U.S.C. §103, "[t]he PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (Citations omitted). Further, to establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Further, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the

modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780 (Fed Cir. 1992).

1. Claims 1-9

Applicants' independent claim 1, as amended, recites features that are not disclosed by the proposed combination.

Specifically, the proposed combination of *Kiyanagi* and *Borras* fails to disclose, teach, or suggest Applicants' claimed system for synchronizing a portable transceiver to a network for at least the reason that the proposed combination fails to disclose, teach, or suggest at least "logic coupled to the crystal oscillator, the logic configured to estimate a frequency error of a received signal, the frequency error determined by a comparison of the received signal from the network with the output of the crystal oscillator."

In contrast with Applicants' claimed system for synchronizing a portable transceiver to a network, *Kiyanagi* and *Borras* disclose transceivers wherein locally generated signals are compared to a local reference signal.

Kiyanagi is directed to a multiplex radio transmission/receiving system. The system includes a plurality of transmission sections that correspond to a plurality of channels, and a plurality of receiving sections that correspond to the plurality of channels. Each transmission section includes a modulation section, a first frequency conversion section, a first band-pass filter, a second frequency conversion section, and a second band-pass filter. Each receiving section includes a third band-pass filter, a third frequency conversion section, a fourth band-pass filter, a fourth frequency conversion section, and a demodulation section. By selection of an optimum value for a second intermediate frequency of a transmitter and for a third intermediate frequency of a receiver, a group of transmission radio frequencies (RF) signals and a group of local frequency signals are allocated without overlap. As a result, there can be prepared one type of band-pass filter which has broad band-pass characteristics and which is common among the transmission and receiving sections disposed within the multiplex radio transceiver or among repeaters, thus allowing use of common members. (*See Kiyanagi*, Abstract).

The portions of the detailed description of *Kiyanagi* that address radio receiving sections are entirely silent regarding logic configured to estimate a frequency error of a received signal, the frequency error determined by a comparison of the received signal from

the network with the output of the crystal oscillator. (See *Kiyanagi* column 16, line 29 to column 17, line 24.) The only reference to use of an external signal of any kind in *Kiyanagi* is as follows.

> Full duplex communication is established between the two opposing repeaters over the radio propagation path 29 through use of required channels. Of these channels, one type of channel is used for a backup purpose. A master repeater transmits a radio signal at, e.g., a downlink transmission frequency X which is one of seven types of channels. A slave repeater which opposes the master repeater receives the thus-transmitted signal having the transmission frequency X. Simultaneously, the slave repeater transmits a signal at an uplink transmission frequency X', and the master repeater which opposes the slave repeater receives the signal having the transmission frequency X'.
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> For example, frequencies in a U6G band within C-band are allocated in a manner such as that shown in FIG. 13; namely, the uplink channel is allocated channel 1' (a frequency of 6800.0 MHz) to channel 8' (a frequency of 7080.0 MHz); and the downlink channel is allocated channel 1 (a frequency of 6460.0 MHz) to channel 8 (a frequency of 6740.0 MHz).
>
> Since the transmitter and the receiver each select one channel from the eight types of channels, they become symmetrical to each other in terms of band-pass characteristics.

Kiyanagi, column 17 line 64 to column 18, line 14.

Borras is directed to a frequency synthesized transceiver capable of tuning to a plurality of communication channels. The transceiver includes a receiver section and a transmitter section which are coupled to the synthesizer which generates the appropriate injection signals to achieve tuning. The frequency synthesizer includes a multiposition switch which accesses various addressable memory locations in a programmable read-only memory where the appropriate divisors are stored to cause tuning of the synthesizer to the appropriate communication channel. A zone selector switch enables grouping and easy retrievability of channels. The synthesizer includes a priority channel monitoring system utilizing a channel element for rapid sampling. The divisors are supplied to a single synchronous binary swallow counter which works in conjunction with a dual modulus prescaler to monitor the frequency output of the voltage controlled oscillator. An output of a programmable divider coupled to a reference oscillator source is compared with the output of the synchronous counter in a digital and analog phase detector. The phase detector supplies signals through a loop filter to apply the appropriate voltage to the voltage controlled oscillator. The phase detector includes

means to rapidly advance the voltage controlled oscillator to cause frequency tuning. (*See Borras*, Abstract).

In contrast with Applicants' claimed system, *Borras* does not show or describe logic configured to estimate a frequency error of a received signal, the frequency error determined by a comparison of the received signal from the network with the output of the crystal oscillator. In fact, FIG. 3 of *Borras*, which shows a receiver 72 and a transmitter 74, fails to show any coupling of a received signal from a network to the reference oscillator 30 or to the switched VCO tank 42. Accordingly, the proposed combination cannot render Applicants' claimed system obvious for at least the reason that the proposed combination does not disclose, teach, or suggest at least "logic configured to estimate a frequency error of a received signal, the frequency error determined by a comparison of the received signal from the network with the output of the crystal oscillator." Thus, Applicants' independent claim 1 is allowable.

Because independent claim 1 is allowable, dependent claims 2-9, which depend either directly or indirectly from claim 1, are also allowable. *See In re Fine, supra*. Accordingly, Applicants respectfully request that the rejection of claims 1-9 be withdrawn.

2. Claims 10-18

Applicants' independent claim 10, as amended, recites features that are not disclosed by the proposed combination.

Specifically, the proposed combination of *Kiyanagi* and *Borras* fails to disclose, teach, or suggest Applicants' claimed method for synchronizing a portable transceiver to a network for at least the reason that the proposed combination fails to disclose, teach, or suggest at least "determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver."

In contrast with Applicants' claimed method for synchronizing a portable transceiver to a network, *Kiyanagi* and *Borras* disclose transceivers wherein locally generated signals are compared to a local reference signal.

Kiyanagi is directed to a multiplex radio transmission/receiving system. The system includes a plurality of transmission sections that correspond to a plurality of channels, and a plurality of receiving sections that correspond to the plurality of channels. Each transmission section includes a modulation section, a first frequency conversion section, a first band-pass

filter, a second frequency conversion section, and a second band-pass filter. Each receiving section includes a third band-pass filter, a third frequency conversion section, a fourth band-pass filter, a fourth frequency conversion section, and a demodulation section. By selection of an optimum value for a second intermediate frequency of a transmitter and for a third intermediate frequency of a receiver, a group of transmission radio frequencies (RF) signals and a group of local frequency signals are allocated without overlap. As a result, there can be prepared one type of band-pass filter which has broad band-pass characteristics and which is common among the transmission and receiving sections disposed within the multiplex radio transceiver or among repeaters, thus allowing use of common members. (*See Kiyanagi*, Abstract).

The portions of the detailed description of *Kiyanagi* that address radio receiving sections are entirely silent regarding determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver. (See *Kiyanagi* column 16, line 29 to column 17, line 24.) As shown above, *Kiyanagi* describes how full duplex communication can be established between opposing repeaters. The master repeater transmits at a transmission frequency X. The slave responds by transmitting at a frequency X'. There is no other description in *Kiyanagi* with regards to any use of a received signal.

In contrast with Applicants' claimed method, *Borras* is entirely silent regarding determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver. As shown above, FIG. 3 of *Borras*, which shows a receiver 72 and a transmitter 74, fails to show any coupling of a received signal from a network to the reference oscillator 30 or to the switched VCO tank 42. Consequently, *Borras* does not disclose, teach or suggest determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver. Accordingly, the proposed combination cannot render Applicants' claimed method obvious for at least the reason that the proposed combination does not disclose, teach, or suggest at least the step of "determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver." Thus, Applicants' independent claim 10 is allowable.

Because independent claim 10 is allowable, dependent claims 11-18, which depend either directly or indirectly from claim 10, are also allowable. *See In re Fine, supra.* Accordingly, Applicants respectfully request that the rejection of claims 10-18 be withdrawn.

3. Claims 19-27

Applicants' independent claim 19, as amended, recites features that are not disclosed by the proposed combination.

Specifically, the proposed combination of *Kiyanagi* and *Borras* fails to disclose, teach, or suggest Applicants' claimed system for synchronizing a portable transceiver to a network for at least the reason that the proposed combination fails to disclose, teach, or suggest at least "means for determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver."

In contrast with Applicants' claimed system for synchronizing a portable transceiver to a network, *Kiyanagi* and *Borras* disclose transceivers wherein locally generated signals are compared to a local reference signal.

Kiyanagi is directed to a multiplex radio transmission/receiving system. The system includes a plurality of transmission sections that correspond to a plurality of channels, and a plurality of receiving sections that correspond to the plurality of channels. Each transmission section includes a modulation section, a first frequency conversion section, a first band-pass filter, a second frequency conversion section, and a second band-pass filter. Each receiving section includes a third band-pass filter, a third frequency conversion section, a fourth band-pass filter, a fourth frequency conversion section, and a demodulation section. By selection of an optimum value for a second intermediate frequency of a transmitter and for a third intermediate frequency of a receiver, a group of transmission radio frequencies (RF) signals and a group of local frequency signals are allocated without overlap. As a result, there can be prepared one type of band-pass filter which has broad band-pass characteristics and which is common among the transmission and receiving sections disposed within the multiplex radio transceiver or among repeaters, thus allowing use of common members. (*See Kiyanagi*, Abstract).

The portions of the detailed description of *Kiyanagi* that address radio receiving sections are entirely silent regarding means for determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the

portable transceiver. (See *Kiyanagi* column 16, line 29 to column 17, line 24.) As shown above, *Kiyanagi* describes how full duplex communication can be established between opposing repeaters. The master repeater transmits at a transmission frequency X. The slave responds by transmitting at a frequency X'. There is no other description in *Kiyanagi* with regards to any use of a received signal.

In contrast with Applicants' claimed system, *Borras* is entirely silent regarding means for determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver. As shown above, FIG. 3 of *Borras*, which shows a receiver 72 and a transmitter 74, fails to show any coupling of a received signal from a network to the reference oscillator 30 or to the switched VCO tank 42. Consequently, *Borras* does not disclose, teach or suggest means for determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver. Accordingly, the proposed combination cannot render Applicants' claimed method obvious for at least the reason that the proposed combination does not disclose, teach, or suggest at least "means for determining a frequency error of a signal received by the portable transceiver when compared to a frequency generated within the portable transceiver." Thus, Applicants' independent claim 19 is allowable.

Because independent claim 19 is allowable, dependent claims 20-27, which depend either directly or indirectly from claim 19, are also allowable. *See In re Fine*, *supra*. Accordingly, Applicants respectfully request that the rejection of claims 19-27 be withdrawn.

CONCLUSION

In summary, Applicants respectfully submit that presently pending claims 1-27 are allowable and the present application is in condition for allowance. Accordingly, a Notice of Allowance is respectfully solicited. Should the Examiner have any comments regarding the Applicants' response or intends to dispose of this matter in a manner other than a Notice of Allowance, Applicants request that the Examiner telephone Applicants' undersigned attorney.

Respectfully submitted,

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